

Table 3-2. 2003 WRIA 8 Chinook salmon population analysis matrix

Chinook salmon population affiliation		Diversity				Abundance				Distribution					Productivity					WRIA 8 Population Designation Core/ Satellite/ Episodic ⁴
		Production type ¹ Population affiliation origin ¹ Status ¹ Known minimum life history trajectories ²				OBSERVATIONS (since 1996, except Kelsey)				Basin Area (mi2) BFW, min (from EDT) Length of stream used, miles Number of tributaries used/ length used, miles Low gradient un-confined reaches (%) / miles					production/ female		Mean survival ratios			
						PROFESSIONAL SURVEYS	Mean adult abundance	Years of record	Mean adults observed						Incidence of chinook per years of observation	Fry	Smolts	Fry/ egg deposited	Smolts/ egg deposited	
Cedar	Cedar	Native	Wild	Depressed	2	746	64-66, 68-99	n/a	n/a	65	70-100 f	24.9	4/ 3.0	22/ 83 ³	489	136	12.2	3.4	14.4	Cedar Core
	Upper Cedar	Mixed	Comp.	Unk		79	2003			128	70-100 f	unk	unk	18/ 54						Cedar Sat
	Taylor	Native	Wild	Depressed	2	12	98-2003			7.5		1.2	0	54/ 5.5						Cedar Sat
	Peterson	Native	Wild	Depressed	2	1	98-2003			6.4	8 ft	0.2	0	75/ 3.4						Cedar Epi
	Rock	Native	Wild	Depressed	2	3	1960-2003			14.8	17-35 ft	1.3	0	76/ 4.1						Cedar Epi
	Walsh	Native	Wild	Depressed	2	1	98-2003			6.6	8 ft	0.3	0	35/ 5.6						Cedar Epi
N. Lk. Wash.	Bear ⁵	Native	Wild	Unk	2	404	85-99	n/a	n/a	50	10-27 ft	17.1	2/ 7.2	61/ 44	21	72	0.5	1.8	2.3	NLW Core
	Little Bear	Native	Wild	Unk	1	11	71-89, 94, 96	1	1 out of 5	15	12-18 ft	7.6	1/ 0.8	56/ 12						NLW Sat
	North ⁶	Native	Wild	Unk	1	25	74, 76, 81, 84, 86-88,01	8	3 out of 5	29	10-24 ft	10.8	1/ 0.5	71/ 22						NLW Sat
	Swamp ⁷	Native	Wild	Unk	1	6	75-77, 80-81, 84-88, 90	0	0 out of 5	25	10-24 ft	12.2	1/ 2.0	65/ 14						NLW Sat
	Thornton	Native	Wild	Unk	1	3	99-00	1	2 out of 5	11.6	12-15 ft	1.7	1/ 0.2	33/ 4						NLW Epi
	McAleer	Native	Wild	Unk	1	n/a	n/a	11	2 out of 5	3.6	10 ft	2.6	0	61/ 4						NLW Epi
Issaquah	Issaquah ¹⁰	Non-native	Comp.	Healthy	2	2,796	86-99	n/a	n/a	60	8-30 ft	26	5/ 13.4	23/ 34						Iss Core
	Lewis	Non-native	Comp.	Healthy	1	n/a	n/a	9	4 out of 5	1.9		0.6	0	5/ 0.2						Iss Epi
	Laughing Jacobs	Non-native	Comp.	Healthy	1	n/a	n/a	n/a	n/a	16		0.5	1/ 0.5	68/ 0.5						Iss Epi
Unaffiliated based on SASSI and TRT	Kelsey ⁸	Native	Wild	Unk	1	138	99-00	70	11 out of 11	17	5-19 ft	13	3/ 5.9	76/ 17						NLW Sat ⁹
	Coal	Native	Wild	Unk	1	n/a	n/a	0	1 out of 5	9	7-9 ft	2.1	0	14/ 2						NLW Epi
	May	Native	Wild	Unk	1	2	82, 98-99	2	2 out of 4	14	9-15 ft	3.2	0	49/ 14						NLW Epi
	Juanita	Native	Wild	Unk	1	1	88	0	0 out of 3	6.6	2 ft	2.2	0	60/ 5						NLW Epi
	Pipers	Unk	Unk	Unk	1	n/a	n/a	n/a	n/a	2.9		0.4	0	12/ 1 est.						Unaffiliated Epi

¹ from SASSI

² Minimum life history trajectories currently represents the number of observed juvenile life history strategies

³ Includes Upper Cedar River Watershed

⁴ Core/Satellite/Episodic:

Core subareas: Chinook salmon are present on an annual basis in the subarea and the subarea represents the center of (highest) abundance for each population affiliation (for spawning, rearing, and migration areas). It is recognized that geographic size of the subarea and the amount or location of suitable spawning and/or rearing habitat often distributed within the subarea (e.g., among tributaries within spawning areas or along shoreline areas) are critical for long term maintenance of the core breeding group, or deme. Because of persistent levels of abundance, the variation in abundance and distribution of these demes have been best accounted for within the watershed, though data gaps exist.

Satellite subareas: Chinook salmon are present most years (more than half the years of a typical 4-5 year life cycle) and are less abundant than in core areas, though population uncertainty exists that is reflective of the level of effort made to determine abundance and distribution. Records are more incomplete, effort is inconsistent among potential satellite areas and methods of enumeration vary. However, it is recognized that geographic size of the subarea and the amount of suitable spawning and rearing habitat often distributed among tributaries within the spawning subarea are critical for long term maintenance of the satellite and core breeding groups

Episodic use subareas: Chinook salmon are present infrequently, and may not be present or observed during the typical 4-5 year life cycle, indicating that when fish are observed, they are strays from another production area and not necessarily the progeny of natural production from the area in question. Epizodic use areas typically are smaller in geographic size, offer limited spawning and rearing opportunities (relative to core and satellite areas), due not only to limited habitat availability, but also due to habitat degradation that likely has a greater negative influence over the limited area, and the likelihood that natural production will be successful and hence contribute to the maintenance of the local breeding group and the core population as a whole.

⁵ Bear Creek includes Lower Bear, Upper Bear, Cottage Lake and Evans subareas.

⁶ North Creek includes Upper North and Lower North Creek subareas.

⁷ Swamp Creek includes Upper Swamp and Lower Swamp Creek subareas.

⁸ Kelsey Creek includes Upper Kelsey and Lower Kelsey Creeks as well as Mercer Slough.

⁹ Proximity to Cedar River suggests Kelsey Creek could be a satellite of the Cedar. Geomorphology suggests Kelsey Creek chinook are closer to North Lake Washington population. Technical committee assigns to NLW tribs.

¹⁰ Issaquah Subbasin includes North Fork, East Fork, Lower Issaquah, Middle Issaquah, Upper Issaquah, Fifteenmile, and McDonald subareas.